

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 1-20 are in this application. Claims 11-15 and 18-20 have been amended. In addition to the amendments discussed below, the method claims have also been amended to broaden the claims. Further, the Summary of the Invention section of the specification has been amended.

Applicant wishes to replace the informal drawings filed with the application with the replacement sheets attached in Appendix A. Marked up copies of the informal drawings have not been attached as it is believed that the replacement sheets have the same content as the informal drawings except for informalities. (The present replacement sheets are also to replace the formal drawings filed on July 31, 2003, and received by the PTO on August 4, 2003, if these drawings have been entered into the file.)

The Examiner rejected claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over applicant's prior-art FIG. 1 in view of Fike et al. (U.S. Patent Application Publication No. US 2005/0013609 A1). For the reasons set forth below, applicant respectfully traverses this rejection.

Claim 1 recites, in part:

"a memory having a plurality of first memory cells that store a first identification number and a second plurality of memory cells that store a second identification number, the first identification number representing a first optical device that is associated with a network end point, the second identification number representing a second optical device that is associated with the network end point, the second optical device being a replacement for the first optical device."

In rejecting the claims, the Examiner appears to argue that "the plurality of first memory cells" required by claim 1 can be read to be the memory cells in the first row of table 134 shown in applicant's prior-art FIG. 1. The Examiner also appears to argue that the "first identification number" representing a first optical

device as required by claim 1 can be read to be the active identity number (e.g., serial number) of an optical network terminal (ONT) that could be listed in the first row of table 134.

In addition, the Examiner appears to argue that "the plurality of second memory cells" required by claim 1 can be read to be the memory cells in the second row of table 134 shown in applicant's prior-art FIG. 1. Further, the Examiner appears to argue that the "second identification number" representing a second optical device as required by claim 1 can be read to be the active identity number of an ONT that could be listed in the second row of table 134.

Applicant's claim 1 also requires that the first identification number representing a first optical device be associated with a network end point, and the second identification number representing a second optical device be associated with the network end point. In response to this claim requirement, the Examiner appears to argue that it would be obvious to use the active identity number in the second row of table 134 shown in applicant's prior-art FIG. 1 to represent a replacement ONT for the network end point listed in the first row of table 134.

The Examiner appears to further argue that one skilled in the art would have been motivated to interpret table 134 in this way to minimize the interruption of network service in case the first optical device malfunctions. The reasoning suggested by the Examiner, however, would not motivate one skilled in the art to interpret table 134 as suggested by the Examiner because the interpretations suggested by the Examiner would not minimize the interruption of network service.

In table 134 shown in applicant's prior-art FIG. 1, the first field in the first row is for a first network end point, and the second field in the first row is for the active identity number (e.g., serial number) of the ONT that is connected to the first network end point. Further, the first field in the second row is for a second network end point, and the second field in the second row is for the active identity number (e.g., serial number) of the ONT that is connected to the second network end point.

If the second field in the second row of table 134 were also considered to be the replacement ONT for the first network end point listed in the first field of the first

row (in case the first optical device malfunctions), the result would not be less interruption in network service as suggested by the Examiner, but significantly more interruption in service.

This is because merely assigning the active identity number of the ONT in the second row of table 134 to be the replacement for the network end point listed in the first row of table 134 does not change the fact that the ONT listed in the second row of table 134 is physically connected to the second network end point for a second user. As a result, just to get a first user back online, a technician would need to physically remove the ONT at the second network end point from the second user and use it to replace the failed ONT for the first user at the first network end point.

In addition, by assuming that the ONT connected to the second network end point is no longer connected to the second network end point, even though it actually remains connected until the technician can disconnect it, causes service to the second network end point to be lost or severely disrupted. As a result, one skilled in the art would not be motivated to use the second field in the second row of table 134 to represent a replacement ONT for the first network end point listed in the first field in the first row of table 134 as suggested by the Examiner. Thus, claims 1-10 are patentable over applicant's prior-art FIG. 1 in view of Fike.

Further, applicant notes that the earliest date that the Fike publication is entitled to is July 16, 2003 based on a number of provisional patent applications, such as Provisional Application No. 60/487,876. The present application, however, has a filing date of July 10, 2003. Thus, since the present application has a filing date that precedes the earliest date that the Fike reference is entitled to, the Fike reference may not be used against the present application. As a result, claims 1-10 are patentable over applicant's prior-art FIG. 1 in view of Fike for this additional reason.

The Examiner also rejected claims 11-17 under 35 U.S.C. §103(a) as being unpatentable over applicant's prior-art FIG. 1 in view of McBrearty et al. (U.S. Patent

No. 6,748,550 B2). For the reasons set forth below, applicant respectfully traverses this rejection.

Claim 11 has been amended and recites:

“periodically sending a first message to an end point to be received by a first optical device, the first message including a first identification number;

“determining whether the first optical device has failed to respond to the first message a predetermined number of times; and

“sending a second message to the end point to be received by a second optical device when the first optical device fails to respond the predetermined number of times, the second message having a second identification number that represents the second optical device, only one optical device being connected to the end point at a time.”

In rejecting the claims, the Examiner stated that the difference between applicant's prior-art FIG. 1 and the claimed invention is that the OLT in applicant's prior-art FIG. 1 does not determine whether the first optical device has failed to respond to a predetermined number of first messages, and send a second message with a second identification number that represents a second optical device when the first optical device fails to respond to the first messages.

The Examiner then argued that it is well known in the art to use periodic signals to monitor the failure of a device, and replace the device if it fails. As an example, the Examiner points to the McBrearty reference as teaching the use of a periodic heartbeat signal or “keep alive” signal to monitor a computer in a computer system to determine when the computer fails. (Citing column 1, lines 27-50 of McBrearty.)

The section of McBrearty cited by the Examiner teaches a clustered computer system where each computer periodically outputs a heartbeat signal when it is functioning correctly, and monitors the heartbeat signal output by the other computers in the cluster. When a first computer is no longer able to detect a heartbeat signal output from a second computer, the first computer takes over the role performed by the second computer.

The section of McBrearty cited by the Examiner, however, fails to teach or suggest the periodically sending and determining elements of claim 11. Although McBrearty teaches that each computer in the clustered computer system determines whether it is receiving heartbeat signals from the other computers in the system, no computer sends out a keep alive type message, and determines whether or not the message was responded to by the recipient. As a result, the McBrearty reference fails to teach or suggest the periodically sending and determining elements of claim 11.

Further, the section of McBrearty cited by the Examiner does not teach or suggest the sending a second message element as required by claim 11. From what applicant can determine, there is no discussion in the section of McBrearty cited by the Examiner that teaches or suggests that after a first computer determines that a second computer at an end point is offline (no longer outputting a keep alive signal), the first computer sends a message to a third computer at the end point where the second computer has gone offline.

Thus, from what applicant can determine, the section of McBrearty cited by the Examiner does not teach or suggest the periodically sending, determining, and sending elements of claim 11. As a result, since applicant's prior-art FIG. 1 and the McBrearty reference both fail to teach or suggest at least one of these elements, claim 11 is patentable over applicant's prior-art FIG. 1 and the McBrearty reference. (Claim 11 was also amended to add further clarity.)

The Examiner also rejected claims 18-20 under 35 U.S.C. §103(a) as being unpatentable over applicant's prior-art FIG. 1 in view of Fike et al. and further in view of Daudelin et al. (U.S. Patent No. 6,591,389 B1). For the reasons set forth below, applicant respectfully traverses this rejection.

Claim 18 has been amended and recites:

"A method of servicing a network, the network having a first optical device associated with a network end point, the first optical device having a first identification number, the method comprising:

"associating a second identification number with the network end point so that the first optical device continues to receive network traffic until the second optical device responds to network traffic, the second identification number representing a second optical device that is a replacement for the first optical device; and

"dispatching a technician to the network end point to service the network end point."

In rejecting the claims, the Examiner appears to argue that if a network end point is added to table 134 (shown in applicant's prior-art FIG.1) in the first field of the row, and the active identity number of the ONT that is connected to the added network end point is added to table 134 in the second field of the row, then it would be obvious to configure the added ONT to be a replacement for an ONT that is already a part of the network.

As noted above in the discussion of claim 1, one skilled in the art would not be motivated to use the second field in the second row of table 134 to represent a replacement ONT for the first network end point listed in the first field in the first row as suggested by the Examiner because to do so would lead to severely disrupted network service. As a result, claims 18-20 are patentable over applicant's prior-art FIG. 1 in view of Fike and further in view of Daudelin.

In addition, claim 18 has been amended to recite that the second identification number is associated with the network end point so that the first optical device continues to receive network traffic until the second optical device responds to network traffic. By associating a second identification number with the network end point so that the first optical device continues to receive network traffic, the end user continues to receive limited service if there is a partial failure, or complete service if an upgrade is planned. Simply replacing the identification number of the failed part with the identification number of a replacement part in a


computer, and sending a technician to replace the part can lead to hours of lost service for the end user.

Further, as noted above, the Fike reference can not be used as a reference because the filing date of the present application (July 10, 2003) precedes the earliest priority date (July 16, 2003) of the Fike reference. As a result, claims 18-20 are patentable over applicant's prior-art FIG. 1 in view of Fike and further in view of Daudelin for this further reason.

Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are respectively requested.

Respectfully submitted,

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APPENDIX A